

**NATURAL RESOURCES CONSERVATION SERVICE
MISSOURI CONSTRUCTION SPECIFICATION**

**FOR
GEOTEXTILE
(753)**

General

This item of work shall consist of furnishing and installing the specified geotextile as shown on the drawings.

Site preparation

The work area shall be cleared of all timber, roots, vegetation, trash, stones or other items that may perforate the geotextile. Finished Subgrade shall be firm soil that is reasonably smooth prior to placing geotextile.

Materials

Fibers used in manufacture of geotextiles shall consist of long-chain polyolefins, polyesters, or polymids.

The geotextile shall be a non-woven, needle punched fabric meeting or exceeding the following requirements:

Tensile strength (D4632) ¹ ----- 150 lbs min
Bursting strength (D3786) ----- 280 psi min
Elongation at failure (D4632) ----- 50% min
Ultraviolet resistance (D4355)----- 70% min
 tensile strength retained
Puncture (D4833)----- 80 lbs min
AOS-Standard sieve opening
(D4751) ----- #40 max ²
Permittivity (D4491) -----0.70/sec ³

¹ The ASTM (American Society for Testing and Materials) reference number is in parenthesis.

² The AOS (apparent opening size) shall be #40 (0.425 mm) to #70 (0.212 mm) sieve size unless otherwise shown on drawings.

³ Minimum 0.70/sec is equivalent to minimum 50 gpm/ft² (gallons per minute per square foot).

Geotextile fabric weight (ounces per square yard) shall be as shown on drawings but shall not be less than shown below:

Fabric Weight	Armor Stone or Drainfill
≥ 6 oz./sq. yd.	Sand, gravel, cobbles, hand placed concrete blocks
≥ 9 oz./sq. yd.	Riprap, D ₅₀ = 6 inch
≥ 14 oz./sq. yd.	Riprap, D ₅₀ = 12 inch or larger and for important installations

Installation

The geotextile shall be unrolled along the placement area and loosely laid, without stretching in such a manner that it will conform to the surface irregularities when materials are placed on or against it.

Joints shall be made by overlapping fabric 18 inches and securely fastened to ground by pins. Pins shall be placed a minimum of 2 inches from edge of fabric at spacing not to exceed 12 feet unless otherwise directed by engineer. Damaged areas shall be repaired by a overlay patch of fabric that extends a minimum of 2 feet beyond edge of damaged area. The patch overlap shall be securely pinned to ground.

Geotextile placed on a steep slope shall be anchored at top of slope in a header trench, as shown on drawings. The header trench shall be minimum 1 foot deep and 3 inches wide. Place geotextile in header trench and backfill to lock the geotextile in place.

At lap joints going down the slope the uphill roll shall overlap the downhill roll a minimum of 24 inches and be securely pinned, according to manufacturer's recommendations.

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To protect from ultra violet light all geotextile unrolled shall be covered with the designated material the same working day.

Placement of rock shall be accomplished by equipment capable of controlling the drop. The maximum drop is three feet. Rock shall not be pushed or rolled over the geotextile.

If a gap exceeding 4 inches is anticipated between stones in a rock riprap installation, a 6 inch layer of gravel or fine rock shall be used as bedding in the subgrade. Normally most riprap contains enough fines that this is not a problem.

Additional details:
